UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
VU, THONG H

ART UNIT	PAPER NUMBER
2142	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/445,845	AITTOLA, TIMO
	Examiner	Art Unit	
	Thong H. Vu	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>02 September 2005</u>.

2a) ☐ This action is FINAL.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-46 and 48</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-46 and 48</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

1.   Claims 1-46 and 48 are pending.

2.   This application has claimed the priority of 9/24/1998.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the
United States before the invention thereof by the applicant for patent, or on an international application
by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA)
and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when
the reference is a U.S. patent resulting directly or indirectly from an international application filed before
November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e)
prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-2,5-25,27-42,44-46,48 are rejected under 35 U.S.C. 102(e) as being

anticipated by Hassett et al [Hassett 6,173,311 B1]

3.   As per claim 1, Hassett discloses a method for serving requests for Internet

information files in an Internet caching system [Hassett, caching server on Internet, col

3 lines 1-12], comprising the steps of:

receiving, at a local Internet cache server, a user request from a user for an

Internet information file [Hassett, query files, col 18 lines 4-19];

in response to the received request, making a query for said information file, if

said information file has not been cached by said local server [Hassett, local cache, hit

or miss, col 17 lines 53-64, Fig 18];

in response to a reply to said query, making a file request for said information file,

wherein said, file request is directed to a feeder means if said reply indicates that a

central file server (i.e.: data center) , storing cached Internet information files, has said

information file cached [Hassett, redirect client to cache proxy server, col 8 lines 14-31;

feed servers, col 14 lines 20-27; data center, col 13 lines 30-57, Fig 16]; and

querying, from said feeder means in response to said file request, said central file

server for said information file, in order to decrease the load on said central file server

[Hassett, query the flow, col 18 line 63-col 19 line 8; data center and load balance, col

14 lines 29-40].

4.   Claims 18,39 contain the similar limitations set forth of claim 1. Therefore, claims

18,39 are rejected for the similar rationale set forth in claim 1.

5.   As per claim 2, Hassett discloses said query is performed by said local cache

server in accordance with a protocol used for communicating between Internet Cache

servers [Hassett, protocols other than HTTP, col 3 lines 14-26].

6.   As per claim 5, Hassett discloses said query is directed by said local cache

server to said feeder means, which feeder means as a response returns said reply

[Hassett, feed servers, col 14 lines 20-27].

7.   As per claim 6, Hassett discloses deriving, at said feeder means, a query number

corresponding to said information file being concerned in said query [Hassett, query is

based on lastID, col 20 line 65].

8.   As per claim 7, Hassett discloses using the derived query number when querying

said central file server for said information file [Hassett, query is based on lastID, col 20

line 65].

9.   As per claim 8, Hassett discloses said query provides an alphanumerical string

associated with said information file, said string being used in said step of deriving said

query number [Hassett, query is based on lastID, col 20 line 65].

10.   As per claims 9 and 11, Hassett discloses said alphanumerical string is a

Uniform Resource Locator (URL), said query number is derived from said URL and at

least part of a header information field of said file request [Hassett, query is based on

lastID, col 20 line 65].

11.   As per claim 10, Hassett discloses said file request provides an alphanumerical

string associated with said information file, said string being used by said feeder means

deriving a query number corresponding to said information file [Hassett, query is based

on lastID, col 20 line 65].

12.   As per claim 12, Hassett discloses creating an indexed table having an entry for

each Internet information file being cached at said central file or home server [Hassett,

data center and load balance, col 14 lines 29-40].

13.   As per claim 13, Hassett discloses performing a search in said indexed table for said information file; and indicating in said reply to said query whether or not said information file was found during said search [Hassett, local cache, hit or miss, col 17 lines 53-64, Fig 18].

14.   As per claim 14, Hassett discloses said querying step comprises using the Structured Query Language (SQL) when querying said central file server for said information file as inherent feature of database.

15.   As per claim 15, Hassett discloses selecting, based upon an original host name or IP-address of said information file, a central file server out of a set of central file servers, each server of said set being arranged to cache Internet information files with original host names or IP-addresses within a predefined range [Hassett, range header field, col 5 lines 18-28]; and querying the selected central file server for said information file [Hassett, query files, col 18 lines 4-19].

16.   As per claim 16, Hassett discloses selecting, based upon said query number derived for said information file [query identifier, Harel col 11 lines 15-33], a central file server out of a set of central file servers, each server of said set being arranged to cache Internet information files with corresponding query numbers within a predefined

range [Hassett, range header field, col 5 lines 18-28]; and querying the selected central

file server for said information file as inherent feature of accessing data to proxy server.

17.   As per claim 17, Hassett discloses retrieving, at said local cache server, said

information file from its origin server if said reply to said query indicates that said

information file is not cached at said central file server [Hassett, origin server, col 3 lines

28-32]; caching said information file at said local cache server; and updating said

central file server by requesting a copy of said information file from said local cache

server and caching said copy in said central file server [Hassett, update, col 8 lines 11

et seq.]

18.   As per claim 19, Hassett discloses said first means is arranged to operate in

accordance with a layer three Internet protocol [Hassett, TCP/IP, col 8 lines 14-31].

19.   As per claim 20, Hassett discloses said third means is arranged to use the

Structured Query Language (SQL) when querying for said Internet information file as

inherent feature of database.

20.   As per claims 21,27 Hassett discloses said alphanumerical string is included in

said request received from said local cache server using said query derived by said

second means as inherent feature of cache server.

21.   As per claims 23 and 29, Hassett discloses said query comprises a query

number [query identifier, Harel col 11 lines 15-33], the query number being derived by

applying a hash algorithm to said string and to said part of said header information field

as inherent feature of hash coding [Hassett, col 5 line 48-col 6 line 30].

22.   As per claim 24, Hassett discloses said Feeder includes fourth means for

receiving a query for an Internet information file from said local cache server; and fifth

means for providing said local cache server with a reply to the received query as

inherent feature of cache server.

23.   As per claim 25, Hassett discloses said fourth means and said fifth means are

arranged to operate in accordance with a protocol used for communicating between

Internet cache servers as inherent feature of cache server and TCP/IP [Hassett,

TCP/IP, col 8 lines 14-31].

24.   As per claim 30, Hassett discloses said Feeder includes a table with a copy of

the full index of all Internet information files cached at said-central file server [Hassett,

copy of cached data during updating, col 18 line 63-col 19 line 8].

25.   As per claim 31, Hassett discloses said reply to said received query by said fifth

means is based on the content of said table [Hasset, the content server compares the

contents of the two caches, col 12 lines 19-30].

26.   As per claim 32, Hassett discloses requesting means for requesting a copy of an

Internet information file stored in a local cache server; and storing means for storing the

thereby received copy in a central file-server as inherent feature of cache server.

27.   As per claim 33, Hassett discloses said requesting means are arranged to

request a copy of an information file from its origin server, if a local cache server storing

said information file resides behind a firewall [Hassett, firewall, Fig 2].

28.   As per claim 34, Hassett discloses said Updater is arranged to communicate with

said Feeder for receiving an order to request said copy of said information file [Hassett,

feed servers, col 14 lines 20-27].

29.   As per claims 35,48 Hassett discloses said Updater includes a list of known

uncachable information files, for which files a copy should not be requested as inherent

feature of updated.

30.   As per claim 36, Hassett-Harel disclose said Feeder is implemented by a lower

end computer and said central file server is implemented by a higher end computer as

inherent feature of server computers.

31.   As per claim 37, Hassett discloses said Updater is implemented by a lower end

computer and said central file server is implemented by a higher end computer as

inherent feature of updated.

32.   As per claim 38, Hassett discloses said Updater and at least one Feeder are

implemented by a single lower end computer as inherent feature of updated.

33.   As per claim 40, Hassett discloses said feeder means are included in said central

cache site or home server [Hassett, feed servers, col 14 lines 20-27].

34.   As per claim 41, Hassett discloses each of said feeder means includes a plurality

of Feeders, each of said Feeder interconnecting a subset of said set of local cache

servers with said central file server [Hassett, feed servers, col 14 lines 20-27].

35.   As per claim 42, Hassett discloses said central cache site is arranged to serve a

defined set of local cache servers, which set in turn serves a linguistically and culturally

homogenous user community as inherent feature of cache server.

36.   As per claim 44, Hassett discloses each of said Feeder includes a table with a

copy of the full index of all information files cached at said central cache site as inherent

feature of database.

37.   As per claim 45, Hassett discloses said central file server includes cached

Internet information files having original host names within a predefined range [Hassett,

range header field, col 5 lines 18-28].

38.   As per claim 46, Hassett discloses updater means, interconnecting said central

file server with at least one local cache server of said set, for retrieving a copy of an

Internet information file form its origin server or from said at least one local cache server

and for storing said copy in said central file server [Hassett, origin server, col 3 lines 28-

32].

39.   As per claim 22, Hassett discloses said query is derived from said

alphanumerical string and at least part of a header information field of said request

received from said local cache server using said query derived by said second means

[Hassett, conditional field(s), col 5 lines 18-28].

40.   As per claim 28, Hassett discloses said query derived by said second means is

derived from said alphanumerical string and at least part of a header information field of

said query received from said local cache server as inherent feature of message.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

41.   Claims 3-4,26,43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassett et al [6,173,311 B1] in view of Wessels et al [Cache Digest, April 1998].

42.   As per claims 3 and 4, Hassett discloses an Internet environment wherein a client request information to a home/central server and a plurality of local cache server [Hassett, a local cache server connected to a home/central server via Internet, col 5 line 55-col 6 line 45].

However Hassett does not explicitly detail a protocol used is the Internet Cache Protocol or Cache Digest. It was well-known in the art that Internet Cache protocol (ICP) or Cache Digest was used among Web cache server to improve the exchange queries and replies [Wessels, abstract, page 1].

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to realize that using the ICP or Cache Digest would provide the cache knows whether or not the neighbor holds the requested data. Doing so would enhance the data flow process between Web client nodes, local cache servers and home/central servers over the large network.

43.   Claims 26,43 contain the similar limitations set forth of claims 3-4. Therefore, claims 26,43 are rejected for the similar rationale set forth in claims 3-4.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thong Vu*, whose telephone number is (571)-272-3904. The examiner can normally be reached on Monday-Thursday from 8:00AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Andrew Caldwell*, can be reached at (571) 272-3868. The fax number for the organization where this application or proceeding is assigned is 571-273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIRI system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thong Vu
Patent Examiner
Art Unit 2142